

# **Virginia's Highway Safety Corridor Program**

**I-95 in Prince William County**  
November 18, 2004

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Highway Safety Corridor Program



# Purpose

Reduce highway deaths and injuries

# Background

- In 2003, 942 people died, 78,842 more were injured in highway crashes
- New VA Law helps State Police, VDOT, & DMV address safety in high crash locations
  - Increased fines → in most cases doubled
- First corridor on I-81 has reduced crashes particularly those severe

# Legislative Requirements

- Limited to interstates and primaries
- Designation of highway segment based on engineering studies of:
  - Type and volume of traffic
  - Crashes
- Public hearings prior to adopting criteria and designating corridors
- Report data on effectiveness annually

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# Enforcement, Education and Engineering

- Fines for moving violations are doubled in designated corridors, subject to:
  - \$500 maximum for traffic infractions
  - \$200 minimum for criminal infractions
- Public awareness and driver education
- Assessment of crashes for low-cost improvements

# Highway Safety Corridor Regions

## INTERSTATE CRASHES BY REGION

### 2000-2002

REGION 1 - WEST  
(483 interstate miles)  
7,821 Total Crashes

REGION 3 - NORTHEAST  
(214 interstate miles)  
16,944 Total Crashes

REGION 2 - SOUTHEAST  
(432 interstate miles)  
21,714 Total Crashes

A 'Crash' is a reported accident with \$1,000 or more of damage.

# Safety Corridor Identification

- Preliminary screening
  - Identify high crash frequency & rate sites
- Detailed analysis of corridors
  - Causal factors
  - Potential corridor effectiveness
- Corridor selection

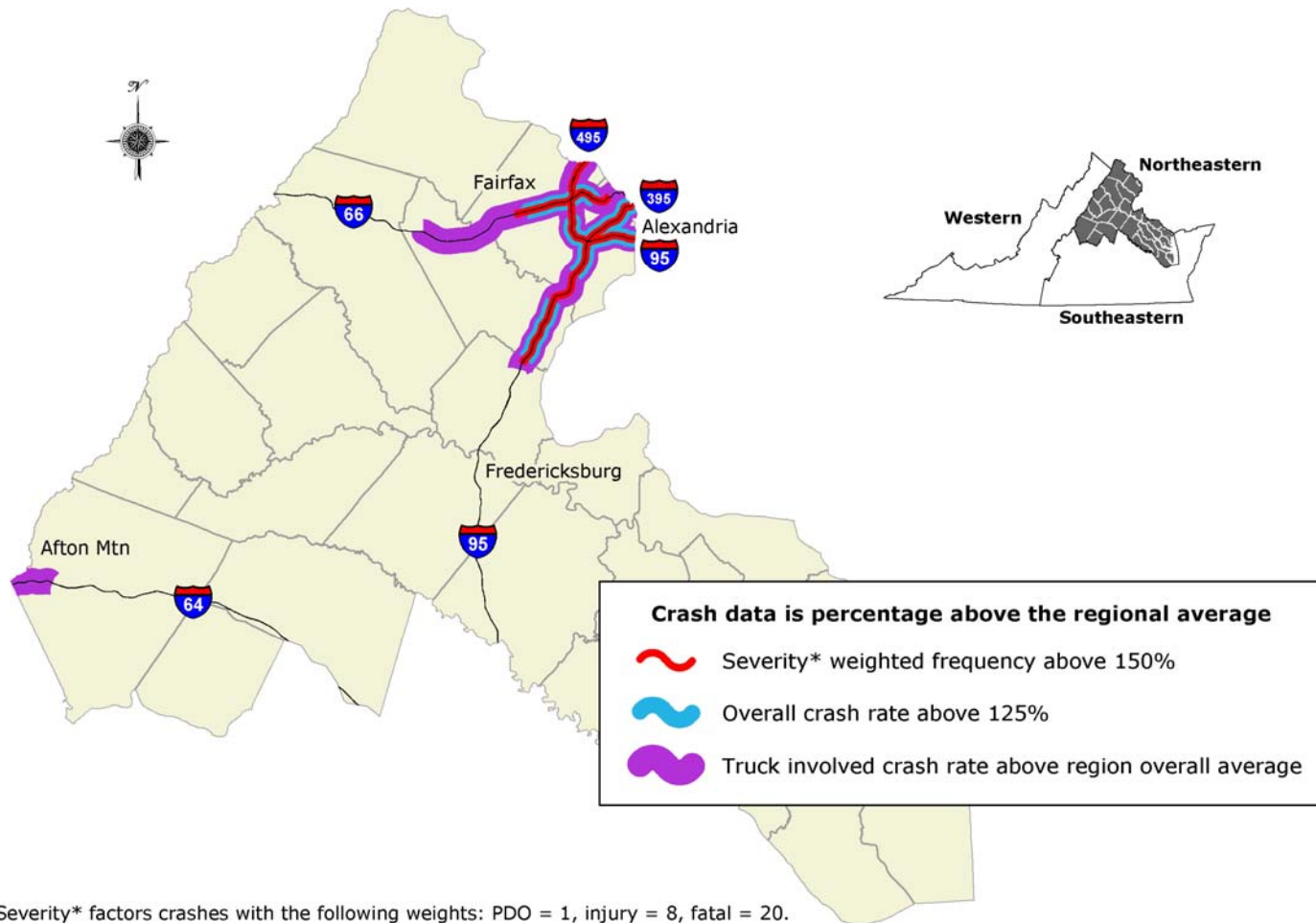


# Screening Criteria

- Crashes per mile (weighted by severity) must exceed 150% of regional average
- Overall crash rate must exceed 125% of regional average
- Truck-involved crash rate must exceed regional average



# Northeast Region Interstate Safety Corridor Candidates



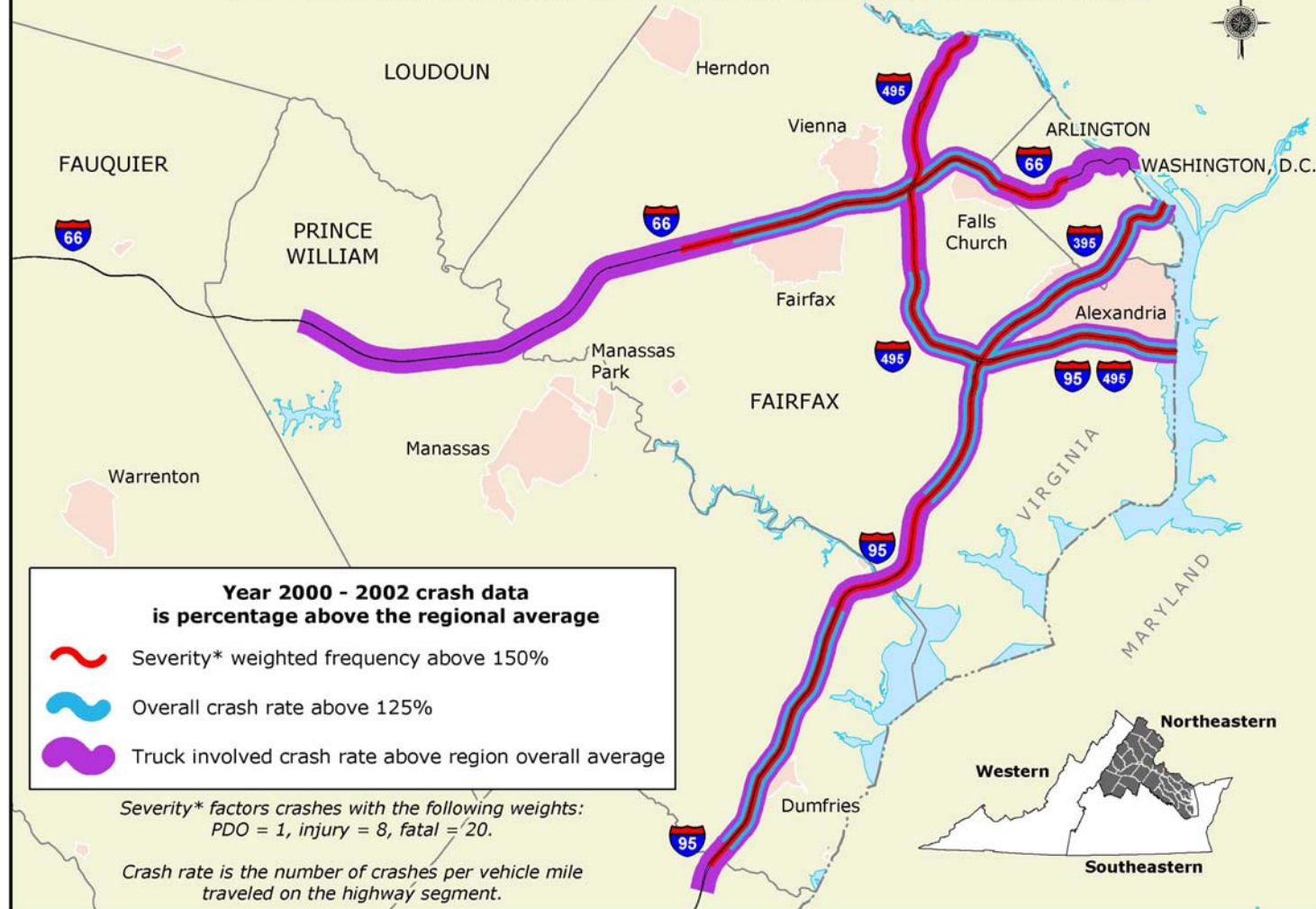
Severity\* factors crashes with the following weights: PDO = 1, injury = 8, fatal = 20.

Crash rate is the number of crashes per vehicle miles traveled on the highway segment.

VDOT - Cartography Section - 11/03 - #36

## Highway Safety Corridor Program

# NE Region - Northern Virginia District INTERSTATE SAFETY CORRIDOR CRITERIA



VDOT - Cartography Section - 5/04 - #36b

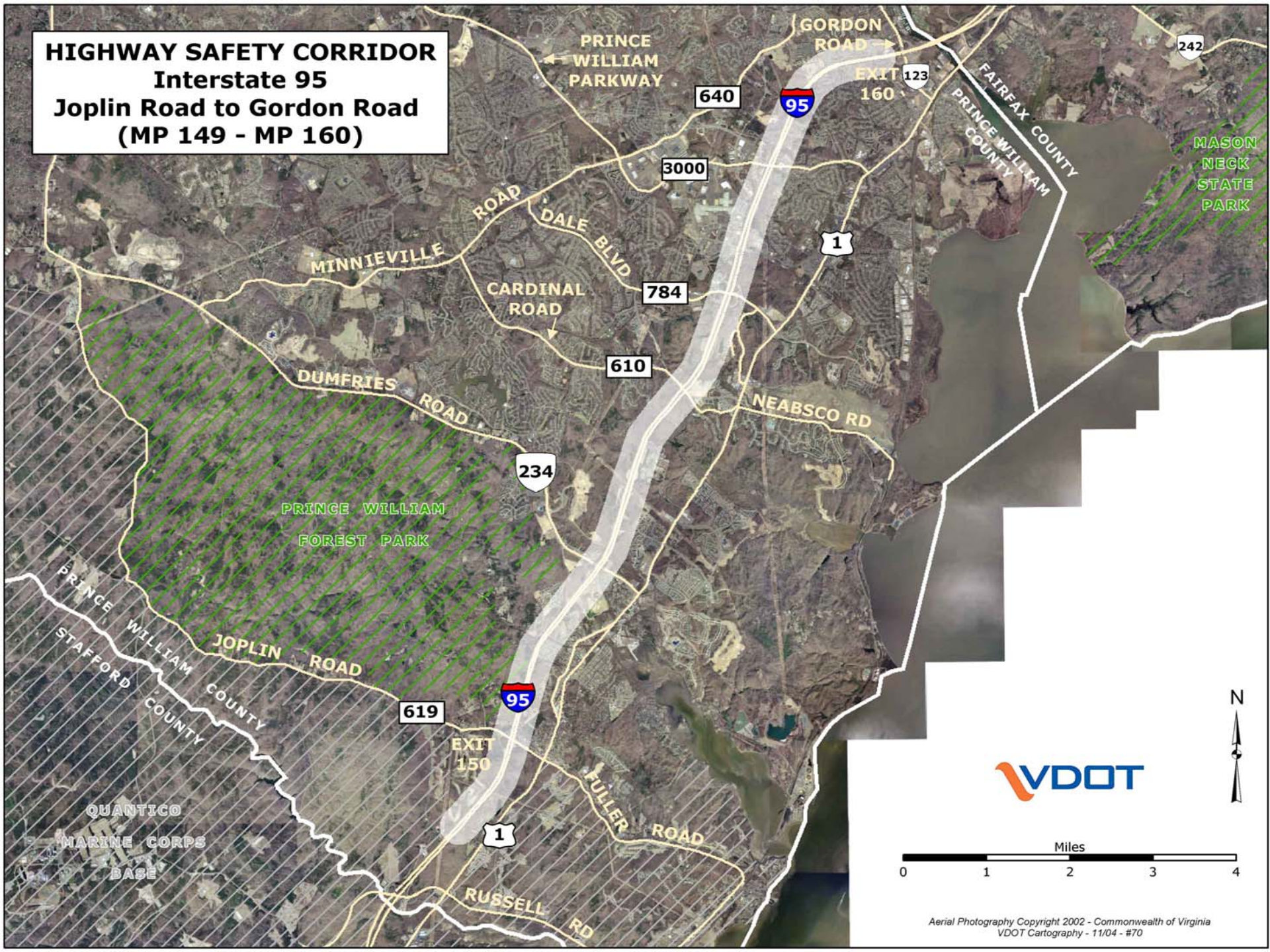
# Proposed I-95 Safety Corridor

## MP 149 to MP 160 – 11 Miles

- South of Rt 619 (Joplin/Fuller Road) to Rt 123 (Gordon Blvd.)
- In Prince William County



**HIGHWAY SAFETY CORRIDOR**  
**Interstate 95**  
**Joplin Road to Gordon Road**  
**(MP 149 - MP 160)**





# Proposed I-95 Safety Corridor

## MP 149 to MP 160

<u>Year</u>	<u>Fender Bender</u>	<u>Injury crash</u>	<u>Fatal crash</u>	<u>Total crashes</u>
2000	310	165	1	476
2001	396	185	5	586
2002	371	188	2	561
	<u>1077</u>	<u>538</u>	<u>8</u>	<u>1623</u>

# I-95 MP 149 to MP 160

## Crash Type Summary

<u><i>Crash Type</i></u>	<u><i>Percentage of Crashes</i></u>
Rear End	56%
Fixed Object – Off Road	25%
Sideswipe – Same Direction	16%
Non-Collision	1%
All Other Crashes	2%

# **I-95 MP 149 to MP 160**

## **Major Factors in Crashes**

<b><u>Major Factor</u></b> <b><u>Crashes</u></b>	<b><u>Percentage of</u></b>
Driver Inattention	70%
Driver Speeding	10%
Driver Under the Influence of Alcohol or Drugs	4%
Driver Handicap	5%
All Other Factors	11%



# Engineering

- Post Signs for Corridor
- Review of Roadside Safety Elements
- Monitor Speeds, Volumes and Crashes

# Corridor Signing Start to Finish

**BEGIN**

**HIGHWAY SAFETY CORRIDOR**

**FINES FOR MOVING VIOLATIONS**

**\$200 MINIMUM – CRIMINAL OFFENSES**

**\$500 MAXIMUM – TRAFFIC INFRACTIONS**

Reflectorized

Regulatory

(15 ft. x 6 ft.)

(12 ft. x 4 ft.)

**END HIGHWAY  
SAFETY CORRIDOR**

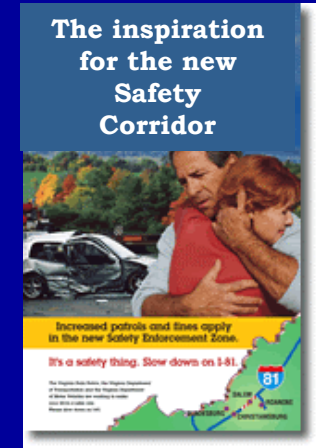
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# Education

- VDOT Public Affairs with VSP & DMV input and outreach
- Radio PSAs, Posters, Brochures, driver education programs
- Website on policy, process, procedures and program effectiveness

[www.virginiadot.org/comtravel/ct-highway-safety-corridor.asp](http://www.virginiadot.org/comtravel/ct-highway-safety-corridor.asp)

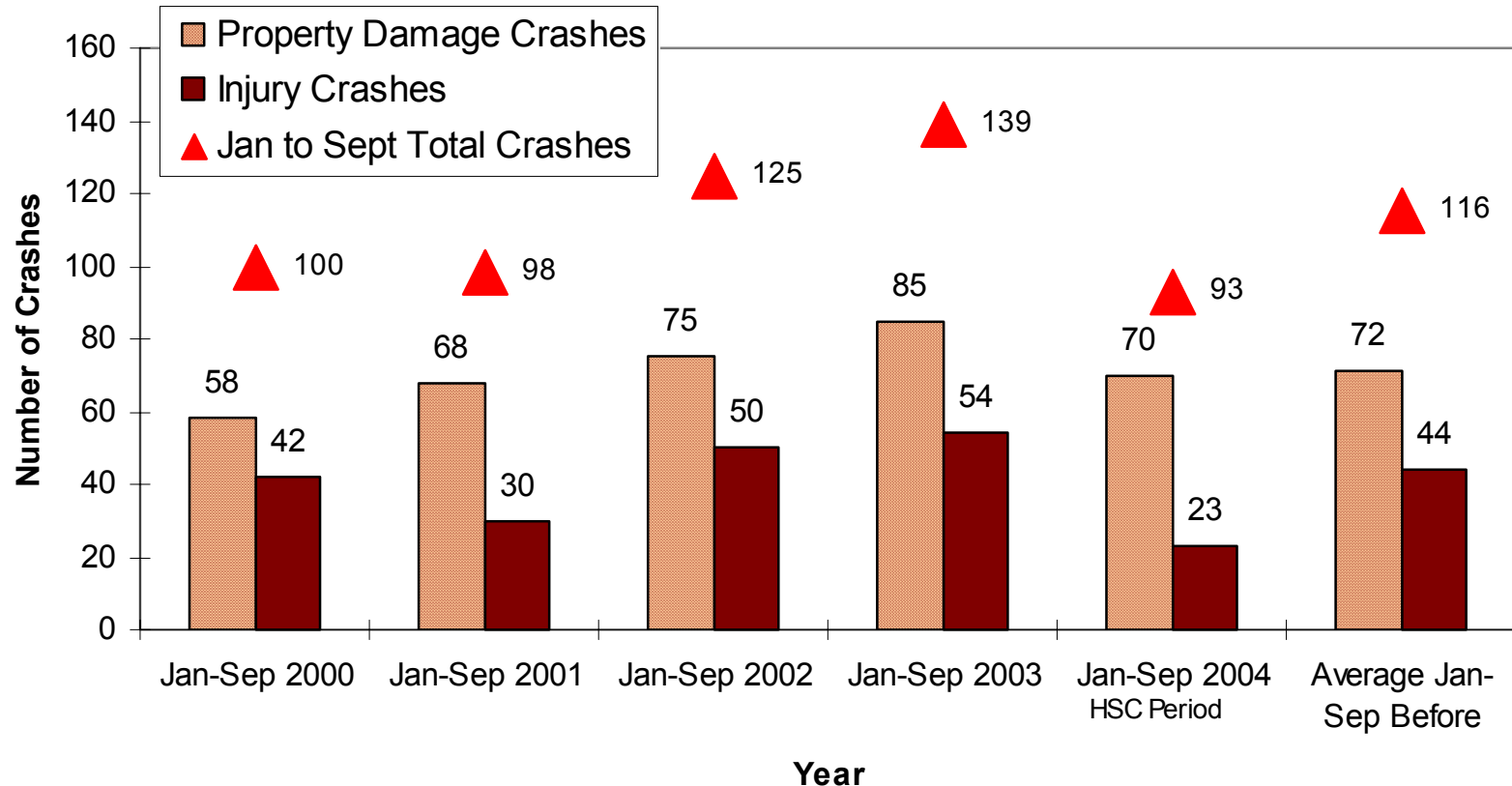


# Next Steps

- **Nov. - Dec. 2004**
  - Designate regional interstate corridors
  - Launch public awareness campaign
  - Initiate targeted law enforcement
- **Jan. - Dec. 2005**
  - Analyze potential primary highway segments
  - Monitor, evaluate & report annually

# First Corridor = Good News

## January to September I-81 Highway Safety Corridor Crash Trends



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# Virginia's Highway Safety Corridor Program

Working Together To Make A Difference

Send Comments by December 3<sup>rd</sup>, 2004

to

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or

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# I-95 Safety Analysis Criteria

- Crash frequency and severity
- Traffic volumes
- Crash rate per miles traveled
- Truck involved crash rate

(note- each data point on the following slides represents the value for the proceeding 5 miles. For example the value for MP 160 is for miles 156 to 160)

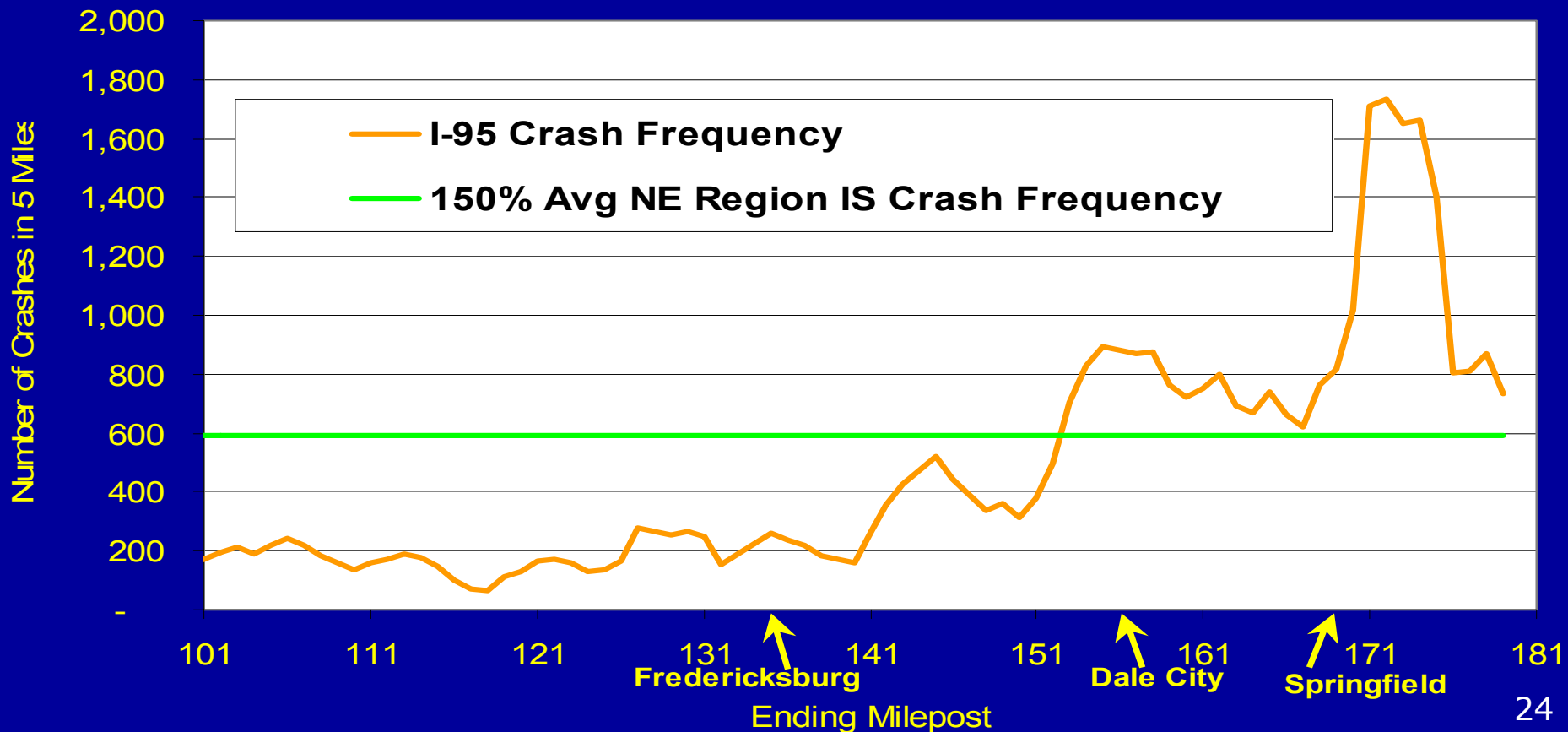


# I-95 Crash Frequency

- # Crashes along I-95 by mile-point
- Caroline County Line line at left
- Potomac River/ MD state line at right
- Look at height and width of peaks
- Where above 150% of regional average

# I-95 Crash Frequency

## I-95 Region 3 Crash Frequency (2000-2002)



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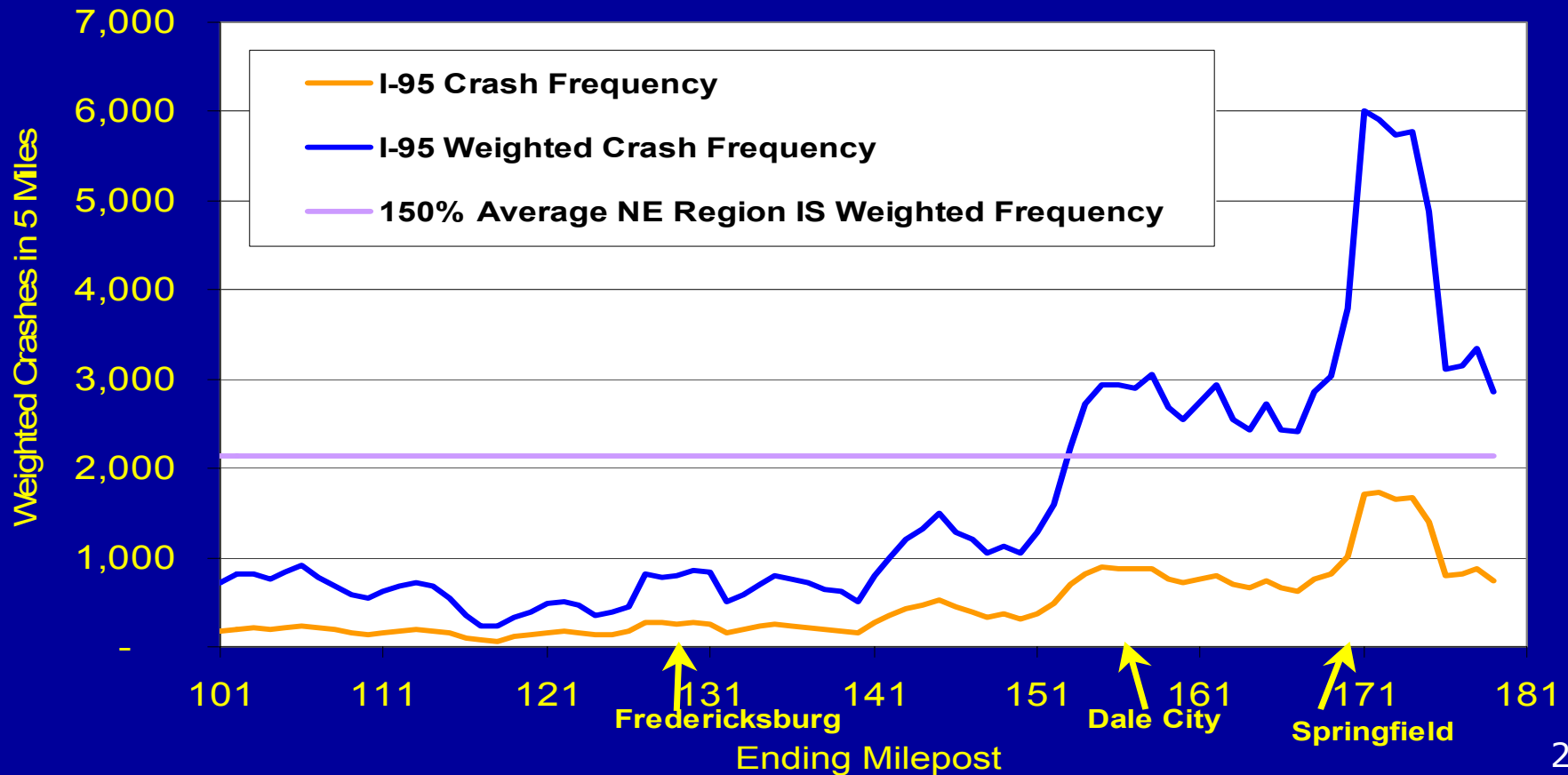


# I-95 Crash Frequency Weighted by Severity

- Previous slide – total # crashes
- Also need to consider severity of crash
- Give added emphasis to injury and fatal crashes
- Look at peaks where above 150% of regional average

# I-95 Crash Frequency Weighted by Severity

(2000-2002 Crashes; PDO=1, Injury=8, Fatal=20)



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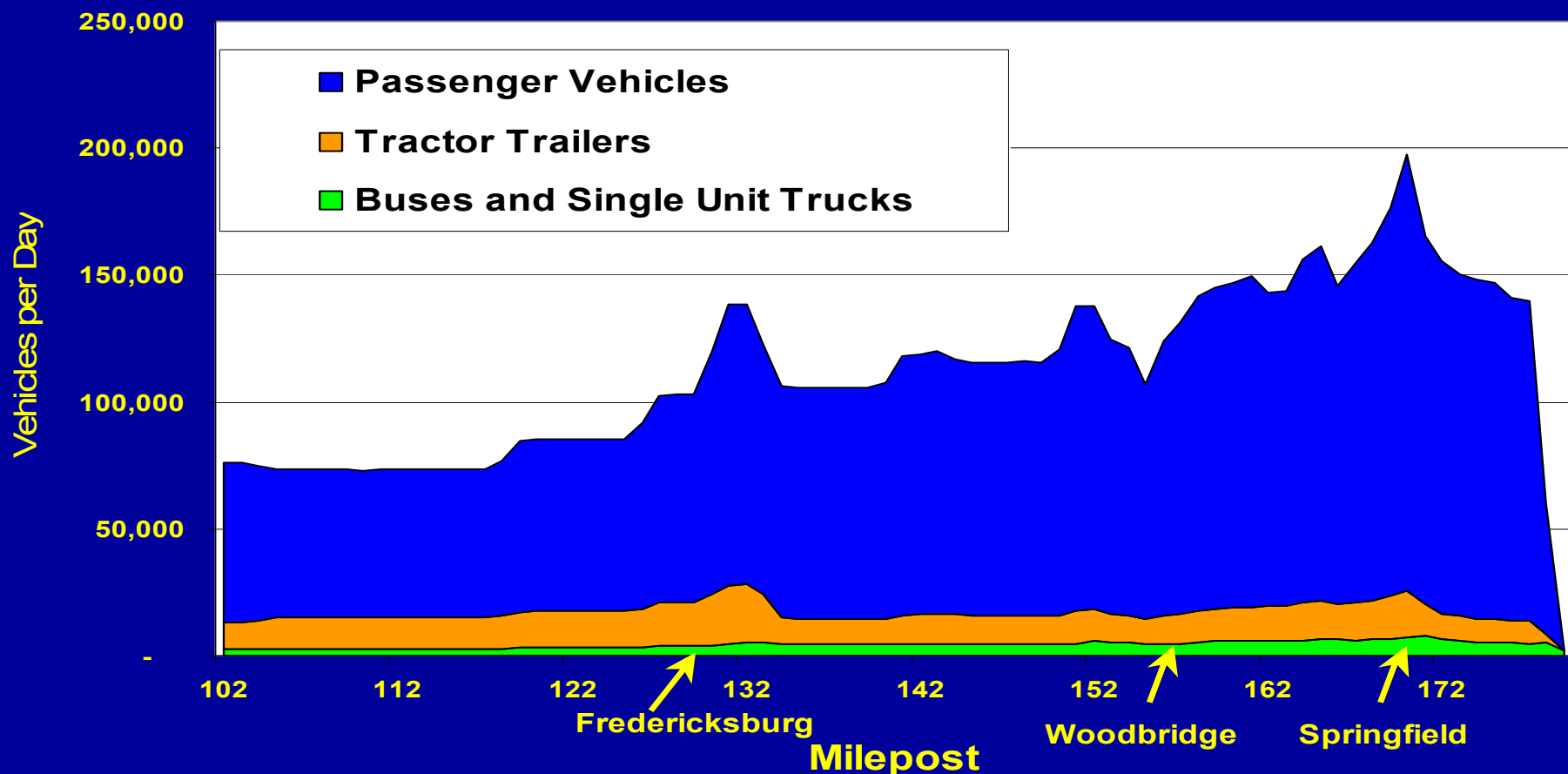


# I-95 Vehicle Mix

- Tractor-trailers
- Other trucks and buses
- Passenger vehicles

# I-95 Vehicle Mix

I-95 Average Daily Traffic By Vehicle Type (2000-2002)



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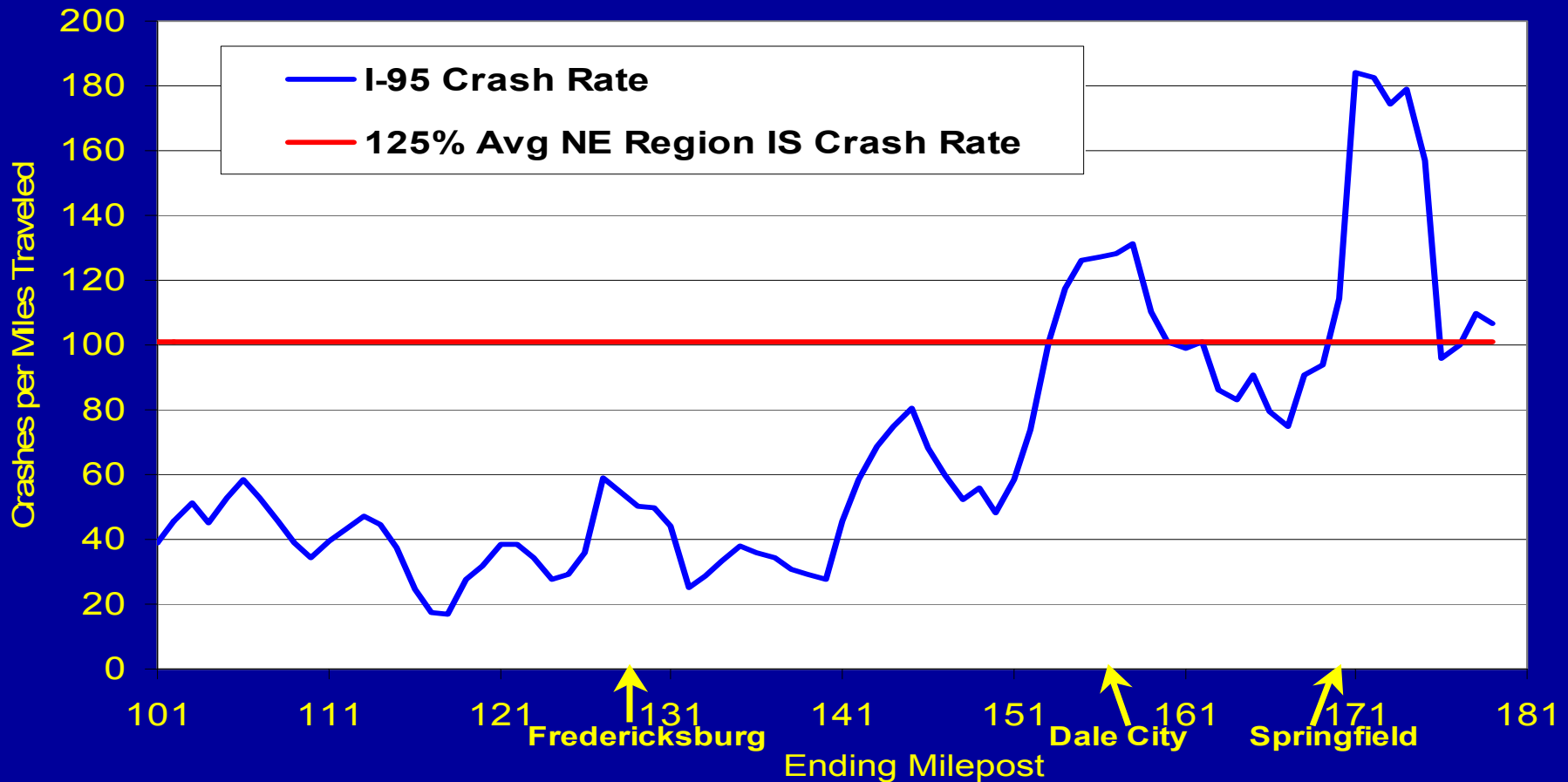
# I-95 Crash Rates

- Adjust # crashes for # vehicles on road
- Compare high crash / high volume locations with lower crash / lower volume locations on more even basis



# I-95 Crash Rates

(2000-2002 Crashes)



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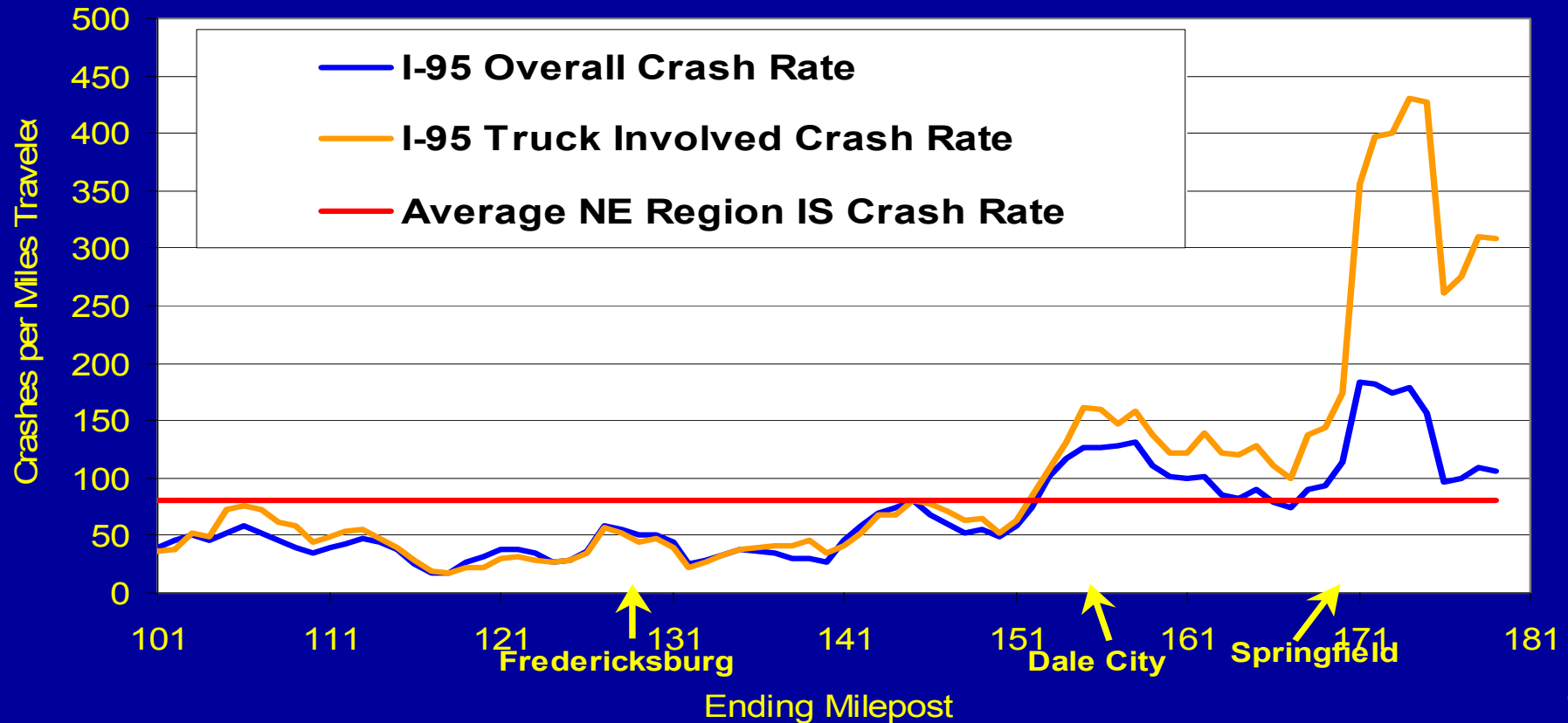


# Comparing Rates for Traffic Mix

- Overall crash rate versus truck-involved crash rate
- NOTE: Truck involved crash does not mean truck caused crash

# Comparing Rates for Traffic Mix

**I-95 Region 3 Crash Rate Comparison:  
All Traffic and Truck Involved (2000-2002 Crashes)**



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